REMARKS

This responds to the Office Action mailed on November 2, 2004.

By way of this amendment, no claims are amended or added. Claims 16-27 are canceled without prejudice. As a result, claims 1-15, 28, and 29 are now pending in this application.

Per the Examiner's suggestion, Applicant has reviewed the specification for errors but did not find any. If the Examiner is aware of any errors, the Examiner is respectfully invited to identify them so that Applicant can correct them.

Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 1-6, 13-15, and 28-29 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

Regarding independent claims 1 and 13, the Examiner asserted it is unclear how the dielectric layer physically separates and is also in physical contact with both the solder bump and the conductor. Claims 2-6, 14-15, and 28-29 were rejected as indefinite for being dependent upon rejected base claims 1 and 13.

With reference to FIG. 6, at least one dielectric layer (320 and/or 322) physically separates solder bump 311 and conductor 332. It will also be seen that the at least one dielectric layer (320 and/or 322) is in physical contact with both solder bump 311 and conductor 332.

This claim language is believed identical to that in the patent issued from Applicant's parent application, e.g. in claim 1, lines 22-26. Thus, Applicant respectfully asserts that it should be suitable in the present application too.

For the above reasons, Applicant respectfully requests that the rejection of claims 1-6, 13-15, and 28-29 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejection of Claims 1-5 and 28-29 under 35 U.S.C. §102(b) as Anticipated by Dougherty

Claims 1-5 and 28-29 were rejected under 35 U.S.C. §102(b) as being anticipated by Dougherty et al. (U.S. 4,439,813).

Dougherty discloses a chip carrier (FIGS 1, 1A, and 2) having solder balls connected to either a top metallurgy layer (FIG. 1A, right-hand side) or to a bottom metallurgy layer (FIG. 1A, left-hand side) through first or second sets of vias, respectively (see col. 2, lines 37-47), of an insulating layer.

In the rejection of independent claim 1, the Examiner asserted that Dougherty discloses "at least one floating terminal (FIG. 1A, right solder ball combination)". However, Applicant points out that neither solder ball in FIG. 1A of Dougherty is a floating terminal as described and defined on page 10, lines 3-8, of Applicant's written description. In Dougherty, the left-hand solder ball is in physical and electrical contact with the bottom metallurgy, whereas the right-hand solder ball is in physical and electrical contact with the top metallurgy. In contrast to the language of Applicant's independent claim 1, neither solder ball in FIG. 1A of Dougherty comprises "at least one dielectric layer physically separating and in physical contact with the . . . solder bump and the . . . conductor".

The rule under 35 U.S.C. §102 is well settled that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2D 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131.

Because Dougherty fails to disclose all of the structural elements recited in claim 1, this claim should be found to be allowable over Dougherty, and Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §102(b) as anticipated by Dougherty be withdrawn.

Claims 2-5, 28, and 29, which depend from claim 1 and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Rejection of Claims 6-15 under 35 U.S.C. §103(a) as Unpatentable over Dougherty in view of Bertin

Claims 6-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Dougherty et al. in view of Bertin et al. (U.S. 6,255,899).

Dougherty was discussed/described previously.

Bertin discloses an interposer 102 (FIG. 1A) between upper chips 112 and lower chips 114/116. At least one speed-critical line 108a-n and/or 110a-n couples the upper and lower

chips. Mode control logic 120 is provided to switch in at least one decoupling capacitor 122a to allow a chip's output to be adapted for driving a light or a heavy signal line load (col. 8, lines 25-27).

As noted above, regarding Applicant's comments on the 102 rejection, Dougherty fails to disclose at least one floating terminal.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, the prior art reference (or references when combined) must teach or suggest every limitation of the claim. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA, 1974). MPEP §2143.

The asserted combination of Dougherty in view of Bertin fails to teach or suggest all of the claim limitations present in independent claims 7 and 13, so a *prima facie* case of obviousness has not been established.

For the above reasons, independent claims 7 and 13 should be found to be allowable over any combination of Dougherty and Bertin, and Applicant respectfully requests that the rejection of claims 7 and 13 under 35 U.S.C. §103(a) as being unpatentable over Dougherty in view of Bertin should be withdrawn.

Claims 8-12 and 14-15, which depend from claims 7 and 13, respectively, and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Additional Elements and Limitations

Applicant considers additional elements and limitations of claims 1-15, 28, and 29 to further distinguish over the cited references, and Applicant reserves the right to present arguments to this effect at a later date.

Documents Cited But Not Relied Upon For This Office Action

Applicant need not respond to the assertion of pertinence stated for the references cited but not relied upon by the Office Action, because these references are not made part of the rejections in this Office Action. Applicant is expressly not admitting to this assertion and reserves the right to address the assertion should it form part of future rejections.

Conclusion

Applicant respectfully submits that claims 1-15, 28, and 29 are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Walter W. Nielsen (located in Phoenix, Arizona) at (602) 298-8920, or the below-signed attorney (located in Minneapolis, Minnesota) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date Feb. 2, 2005

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 2nd day of February, 2005.

Chris Hammond

Name

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Signature